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ZILKA-KOTAB, PC

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Exhibit A

**Disclosure HSJ8-2003-0287**

Prepared for and/or by an Hitachi Attorney - Hitachi Confidential

Created By Harry Gill On 07/01/2003 01:47:45 PM PDT

Last Modified By Victoria Lealao On 10/20/2003 04:03:31 PM PDT

Required fields are marked with the asterisk (\*) and must be filled in to complete the form.

**\*Title of disclosure (In English)**

USE OF THICK Ir COUPLING LAYER IN AP-TAB DESIGN

**Summary**

Status	Final Decision (File)
Final Deadline	
Final Deadline Reason	
Docket Family	HSJ8-2003-0255
*Processing Location	Hitachi SJO
*Functional Area	select (Head & Media 02) Design & Integration / Read - Patton/Shiroishi
Attorney/Patent Professional	Ron Feece/US/HGST@HGST
IDT Team	select Bob Schwenker/US/HGST Ian McFadyen/US/HGST Lew Nunnally/US/HGST Arthur Wall/US/HGST Richard Hsiao/US/HGST Ciaran Fox/US/HGST Jinshan Li/US/HGST Tim Minvielle/US/HGST Leslie Reiter/US/Contr/HGST
Submitted Date	07/01/2003 01:57:42 PM PDT
*Owning Division	select HSJ
Incentive Program	
Lab	
*Technology Code	302
PVT Score	

**Inventors with a Blue Pages entry**

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2/14/06



## HSJ8-2003-0287 USE OF THICK Ir COUPLING LAYER IN AP-TAB DESIGN - continued

**\*Main Idea**

1. Background: What is the problem solved by your invention? Describe known solutions to this problem (if any). What are the drawbacks of such known solutions, or why is an additional solution required? Cite any relevant technical documents or references.

We disclose use of Ir coupling layer in AP-Tab design so that the Ion Beam etching can be used to etch remove the bias layer from the active area without damaging the free layer.

2. Summary of Invention: Briefly describe the core idea of your invention (saving the details for questions #3 below). Describe the advantage(s) of using your invention instead of the known solutions described above.

The structure is as follows:

In the Tab area:

seed layers/CoFe/Ru/CoFe/Cu/CoFe/NiFe/Ir(20A)/NiFe or CoFe or CoFe/NiFe/Ta/Ru/Lead/

In the active area:

seed layers/CoFe/Ru/CoFe/Cu/CoFe/NiFe/Ir/Ta/

20 A coupling layer of "Ir" provides coupling strength close to 1 erg/cm<sup>2</sup> which is more than what 8A of "Ru" provides.

3. Description: Describe how your invention works, and how it could be implemented, using text, diagrams and flow charts as appropriate.

**\*Patent Value Tool****\*PVT II****Evaluation****Search Information****Search Office Information****Final Decision****Post Disclosure Text & Drawings**

Form Revised 09/01/02)

*Handy 1 - free*  
*2/14/06*